REMARKS

Claims 12, 14, 16, 17, 19-27 are pending.

I The "uncovered" language has been deleted.

Therefore, the §112 rejections are respectfully traversed.

II. Independent claims 12 and 14 are not made obvious by the combination of Farmiga and Takahashi.

In connection with the rejection of claims 12 and 14 in view of Farmiga and Takahashi, it is stated on page 4 of the Office Action that having the feature that the two parts engaged with a projection and a cutout is considered an obvious matter of design choice to one skilled in the art since the specification falls to teach the criticality of having this particular arrangement which would overcome any problem in the prior art.

As mentioned on page 6, line 27 to page 7, line 19 of the substitute specification filed on April 25, 2001, the arrangement of the engaging projection and cutout provides a most favorable possible integrator with respect to manufacture, economy, and reproducibility. Further, a possible gap between the parts can be reduced (page 7, lines 9 to 12). Therefore, the specification teaches several advantages of this special arrangement of engaging a projection and a cutout.

Further, the Examiner does not cite any references for supporting the statement that the engagement with a projection and cutout is rather well-known to one skilled in the art. Applicants respectfully assert that a person skilled in the art (i.e., a person familiar with optics) would not consider to engage two parts with a projection and a cutout when these parts are used for forming an optical device. None of Farmiga, Takahashi or Lewis teaches or suggests to engage two parts which form an optical device by an engagement of projection and cutout. Therefore, according to MPEP 2144.03 applicants seasonably challenge the Examiner's assertion and require that a supporting reference or affidavit of the Examiner be provided in the next response as required by MPEP 2144.03.

In item 12, on page 9 of the Office Action, it is argued that it is clear that if one wraps the shrink tube around the circumference of the slabs (including the end regions), the force of the tube which is toward the middle of the tube will just be in same direction of the force shown in the Figure 4C for holding the slabs. It is true that the shrink tube exerts forces as shown in Figure 4C. However, in addition, the shrink tube also pushes the slabs 12 towards each other because the shrink wrap also covers the end regions. Enclosed please find a copy of Figure 4C in which applicants have added arrows for these forces denoted by F1, F2, F3 and F4. Therefore, if one wraps the shrink tube around the circumferences of the slabs (including the end regions), there is the undesired effect that the slabs 12 are transversely moved, i.e., the ends will be pushed inward axially also by the shrink wrap.

This can only be avoided if the tool 36 (Figure 4A) is not removed from the cavity formed. In this case the light integrator cannot be used.

In Figures 5A-5C the slabs are fixed by cement 40, 42. However, in this case there is no need for the shrink tube. If, however, the cement 40, 42 is replaced by the shrink tube, the forces as shown in enclosed amended Figure 4C are exerted on the slabs leading to the transverse sliding of the slabs 12.

As to the rejection of claim 23 the same arguments as discussed above in connection with claims 12 and 14 are applicable. In particular, it is not clear why 2 T-shaped and 2 I-shaped parts can be considered to be obvious matter of design choice to one skilled in the art under MPEP 2144.03 and additional support is requested. Further, the combination of the shrink tube of Takahashi with the light integrator of Farmiga would lead to a light integrator whose cross-section of the cavity would be changed due to the undesired transversely movements of the slabs 12.

In addition, Takahashi only teaches that a flexible part (flexible tube 132) which is slipped over a rigid part (pipe 132) can be forcedly depressed onto the rigid part by use of a shrinking tube. This is a very special kind of connecting two parts and cannot be used for connection parts which are not flexible and which are not slipped one over another (like the slabs of the light integrator of Farmiga). Therefore, the references are not readily combinable and would require an impermissible redesign by hindsight analysis. See MPEP 2143.01 (at page 2100-2125) citing In Re RaH: filing. Therefore, a *prima facie* case of obviousness has not been established by the combination of the references as required by MPEP 706.02(j) and MPEP 2143 citing the authority. This is at least because all the limitations of claims 12 and 14 are not taught or suggested by the references and as explained above, the errors in the

USPTO's reasoning would not lead to motivation to combine or a reasonable expectation of summary as required.

This is a proper amendment after final rejection in accordance with 37 CFR 1.116 because the amendments are minor §112 amendments which place the application in condition for allowance, address the Examiner's concerns, and do not require a new search.

III. Conclusion.

In light of the *FESTO* case, no argument or amendment made herein was related to the statutory requirements of patentability unless expressly stated herein. No claim amendment or argument made was for the purpose of narrowing the scope of any claim unless Applicant has explicitly stated that the argument is "narrowing." It is respectfully requested that all of the claims be reconsidered and allowed. An early and favorable action on the merits is respectfully requested.

Respectfully submitted,

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MARKED-UP CLAIMS

Please amend the claims as follows:

12. (Twice Amended) A method for producing a light integrator, comprising the following steps for forming a cavity of the integrator having an inner reflective coating:

fabricating at least two parts from which the light integrator can be assembled and [whose] which comprise surfaces[,] provided as inner sides of the cavity[, are uncovered];

providing reflective coating on at least the surfaces of the parts [provided as inner sides of the cavity];

assembling and fastening the parts;

wherein the two parts are fabricated such that one of the two parts is provided with a projection for engaging in a cutout of the other part after assembly,

and wherein fastening is carried out by this following steps:

covering the assembled parts with shrink tubing, and;

shrinking the tubing until a suitable strength of the integrator is achieved for reducing a possible gap between said two parts in which light could be lost.

14. (Twice Amended) A light integrator for homogenization of a light bundle entering an input surface and exiting from an output surface, comprising:

said light integrator having a cavity with an inner reflective coating for conducting light;

said light integrator being composed of at least two parts whose surfaces, which [are uncovered prior to assembly and] face inward after assembly, are provided with said inner reflective coating prior to assembly;

wherein one part is provided with a projection engaging in a cut out of the other part after assembly; and

wherein the parts are held together by at least one piece of shrink tubing such that the parts contact one another to be practically light-proof.

19. (Twice Amended) The light integrator according to claim [15] 14, wherein shrink tubing is arranged in 5 the middle between the input surface and output surface for holding the parts together.

23. (Amended) A light integrator for homogenization of a light bundle entering an input surface and exiting from an output surface comprising:

said light integrator having a cavity with an inner reflective coating for conducting light; and

said light integrator being composed of at least two parts whose surfaces, which [are uncoated prior to assembly and] face inward after assembly, are provided with said inner reflective coating prior to assembly;

wherein one part is provided with a projection engaging in a cutout of the other part after assembly, wherein the inner sides and outer sides of the light integrator form a cavity and are planar,

wherein the light integrator has the shape of a geometric prism with rectangular bottom and top surfaces provided as output and input surfaces, and the projection and cutout are rectangular or square in shape; and

wherein the parts comprise two T-shaped and two I-shaped side parts and wherein the parts are held together by at least one piece of shrink tubing such that the parts contact one another to be practically light-proof.